

## **CLAIMS**

1. A method of writing data to a disk drive system including a plurality of disk surfaces and a plurality of heads, each head for writing data to one of the plurality of disk surfaces, the method comprising:

A. writing data to all sectors of a first surface of a first disk with a first head;

B. subsequently writing data to all sectors of a subsequent surface of the first disk with a subsequent head; and

C. allocating spare sectors for a particular head to be located on the particular surface of the disk with which the particular head is associated.

2. A method of writing data to a disk drive system including a plurality of disk surfaces and a plurality of heads, each head for writing data to one of the plurality of disk surfaces, the method comprising:

A. writing data to all tracks of a first surface of a first disk with a first head;

B. subsequently writing data to all tracks of a subsequent surface of a subsequent disk with a subsequent head; and

C. allocating spare sectors for a particular head to be located within tracks located on the particular surface of the disk with which the particular head is associated.

3. A disk drive system comprising:
    - a disk drive assembly including a number  $N$  of disk surfaces, wherein  $N$  is greater than one;
    - $N$  heads for writing data to the  $N$  disk surfaces, each head being configured for writing data to a different one of the  $N$  disk surfaces; and
    - a controller for coordinating the writing of data to the disk surfaces by the heads such that a first head contiguously writes data to all sectors of a first disk surface and a subsequent head contiguously writes data to all sectors of a subsequent disk surface;
  - wherein spare sectors associated with the first head are allocated on the first disk surface and spare sectors associated with the subsequent head are allocated on the subsequent disk surface.
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4. A method of writing data to a disk drive system including a plurality of disk surfaces and a plurality of heads, each head for writing data to one of the plurality of disk surfaces, each disk surface including  $N$  sectors, the method comprising:
    - A. writing data to all  $N$  sectors of a first disk surface with a first head;
    - B. subsequently writing data to all  $N$  sectors of a subsequent disk surface with a subsequent head; and
    - C. allocating spare sectors for a particular head to be located on the particular disk surface with which the particular head is associated.

5. A method of writing data to a disk drive system including a plurality of disks and a plurality of heads, each head for writing data to a plurality of sectors on a surface of one of the plurality of disks, the method comprising:

A. beginning from a first sector on a first surface of a first disk of the plurality of disks, writing, with a first head, data contiguously to sectors on the first surface of the first disk from the first sector on the first disk to the last sector on the first surface of the first disk;

B. writing, with a second head, data contiguously to sectors on a second surface of the first disk from the last sector on the second surface of the first disk to the first sector on the second surface of the first disk;

wherein spare sectors associated with the first head are allocated on the first surface of the first disk and spare sectors associated with the second head are allocated on the second surface of the first disk.

6. The method of claim 5 further comprising:

C. writing, with a subsequent head, data contiguously to all sectors on a first surface of a subsequent disk; wherein spare sectors associated with the subsequent head are allocated on the first surface of the subsequent disk.

7. A method of writing data to a disk drive system including a plurality of disk surfaces and a plurality of heads, each head for writing data to one of the plurality of disk surfaces, the method comprising:

A. beginning from a first sector on a first disk surface, writing, with a first head, data contiguously to sectors on the first disk surface from the first sector on the first disk surface to the last sector on the first disk surface;

B. writing, with a second head, data contiguously to sectors on a second disk surface from the last sector on the second disk surface to the first sector on the second disk surface;

wherein spare sectors associated with the first head are allocated on the first disk surface and spare sectors associated with the second head are allocated on the second disk surface.

8. The method of claim 7 further comprising:

C. writing, with a subsequent head, data contiguously to all sectors on a subsequent disk surface, wherein spare sectors associated with the subsequent head are written to the subsequent disk surface.

9. A disk drive system comprising:  
a disk drive assembly including a number  $N$  of disks;  
 $2N$  heads for writing data to the  $N$  disks, each head  
being configured for writing data on one surface of a  
different one of the disks; and  
a controller for coordinating the writing of data to  
the disks by each of the heads such that a first head  
contiguously writes data to all sectors of a first side of a  
first disk and a second head contiguously writes data to all  
sectors of a second side of the first disk;  
wherein spare sectors associated with the first head  
are written to the first surface of the first disk and spare  
sectors associated with the second head are written to the  
second surface of the first disk.